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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/061,773

02/01/2002

Cui Bao Tai

32008-pa

3821

7590

10/07/2003

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EXAMINER

TOOMER, CEPHIA D

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/061,773

Applicant(s)

TAI ET AL.

Examiner

Cephia D. Toomer

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10,12-30,32,34,35,37-39 and 41-43 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 2-10,12-30,32,34,35,37-39 and 41-43 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.

- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)

- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

- 5) ☐ Notice of Informal Patent Application (PTO-152)

- 6) ☐ Other: _____.

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DETAILED ACTION

This Office action is in response to request for a personal interview and the amendment filed June 19, 2003 in which claims 1, 11, 31, 33, 36 and 40 were cancelled and claims 8-9, 12-13, 27-29 and 43 were amended. It should be noted that the examiner phoned Mr. Kreten on August 28, 2003 to set up a time for the interview. However, Mr. Kreten did not respond to the voice mail message left by the examiner.

The Double patenting rejection is withdrawn in view of Applicant abandoning copending Application No. 09/881310.

The previous rejection of the claims under 35 U.S.C. 112, second paragraph, is withdrawn in view of the amendment to the claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Correct

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the specification for a removable covering.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1196382 in view of Glazkova.

CN teaches a briquette comprising a matrix layer and an igniting layer. The matrix layer comprises anthracite, charcoal, starch and water. The igniting layer comprises anthracite, barium nitrate and sodium nitrate. See abstract in its entirety. CN teaches the limitations of the claims other than the accelerant is a combination of sodium, calcium and potassium nitrates. However, Glazkova teaches this difference.

Glazkova teaches that Na, K, Ba, NH₄ and Ca nitrates are used as oxidant in coal composition. See abstract in its entirety.

It would have been obvious to one of ordinary skill in the art to have used a combination of oxidants because it is prima facie obvious to combine two or more components each of which is taught by the prior art to be useful for the same purpose in order to form a composition to be used for the same purpose. *In re Kerkhoven*, 205 USPQ 1069.

Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christian (US 424,339) for the reasons of record.

Claims 2, 4, 5, 8, 10, 12, 32, 34, 39 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,306,502.

GB teaches a briquette for barbecuing comprising carbonaceous matter and having disposed on top of the carbonaceous material an oxidizing material (accelerant). GB teaches the briquettes contain anthracite (see abstract, claims 1, 4, 5, 6; and Examples).

The carbonaceous material is coal, coke or charcoal. The materials are bound together by use of a water-based binder such as starch. The carbonaceous material and binder are consolidated in a mold by pressure (see page 1, lines 3-7, 14-19, 22-27; page 2, lines 1-2). The briquettes also contain oxidizing material disposed on top of the carbonaceous material. The oxidizing material comprises from 5-75% of the igniting section of the briquette (see page 2, lines 5-22; page 3, lines 2-4). The oxidizers include inorganic nitrates, such as alkali and alkaline earth metals nitrates (see page 4, lines 20-21 and Examples). The briquette may possess one or more flues (see Figures).

GB teaches the limitations of the claims other than the combination of nitrates. However, GB teaches that one or more nitrates may be used in the composition (claim 22) and he exemplifies sodium, potassium and calcium nitrates (see Examples 2, 3 and 6). Therefore, it would have been obvious to one of ordinary skill in the art to have used a combination of oxidants because GB teaches that one or more may be used in the briquette.

GB also fails to teach the separate step of forming the monolith of carbonaceous material and then introducing the accelerant and pressing the carbonaceous material and accelerant. However, it is well settled that the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,306,502 in view of Young (US 4,822,380).

GB has been discussed above. GB fails to teach that the briquette of its invention is coated. However, Young teaches this limitation. See abstract in its entirety. Young teaches that the latex is viscous which suggests that it is thick enough to peel off of the briquette (column 4, lines 45-67). It would have been obvious to one of ordinary skill in the art to have coated the briquette because Young teaches that the coating makes it easier and cleaner to handle the briquette.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,306,502 in view of Young (US 4,822,380) and Avedikian (US 3,934,986).

GB and Young have been discussed above. GB fails to teach that the briquette contains a fusing mean. However, Avedikian teaches this difference (see column 4, lines 54-64).

It would have been obvious to one of ordinary skill in the art to have included a fusing means on the briquettes because it would allow easier ignition of the briquette.

Claims 3, 9, 13-26 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,306,502 in view of Avedikian (US 3,934,986).

GB fails to teach that the briquette contains a fusing mean. However, Avedikian teaches this limitation (see column 4, lines 54-64)..

It would have been obvious to one of ordinary skill in the art to have included a fusing mean on the briquettes because it would allow for easier ignition of the briquette.

Applicant's arguments have been considered but are not deemed to be persuasive.

Applicant argues that Christian fails to teach an accelerant. Applicant argues that Christian's extrusion process would not allow the accelerant to penetrate the base layer.

The examiner respectfully disagrees. The wax of Christian does hasten the burning of the fuel article and penetrates the base layer because Christian teaches that the wax facilitates burning of the fuel article. This teaching suggests that in the absence of the wax the fuel article burns more slowly.

With respect to the claims reciting the fuel has two portions, the wax of Christian coats (covers) and permeates the fuel articles. Therefore, there is a coating layer (the wax) and a fuel layer containing the coal and wax.

Applicant argues that the accelerant layer of the present invention is not a layer with a definite thickness but has a gradient of accelerant. Applicant argues that this alleged difference produces unexpected results.

Applicant has not compared the closest prior art of record to the present invention. The layer of GB is an accelerant and increases the heat release rate of the briquette. Applicant's data compare conventional charcoal briquettes to the briquettes of the present invention. With respect to applicant's accelerant being an integral part of the fuel, it is seen in GB that the accelerant performs the same function as that of the present invention.

Applicant argues that the coating of Young is not removable. The examiner respectfully disagrees. Young teaches that the latex is thick enough to prevent breakage of the coal and therefore it is thick enough that it may be removed.

Applicant argues that Avedikian teaches that the fuse passes through the venting means whereas the fuse of the present invention is located on the surface of the briquette.

It is the examiner's position that the placement of the fuse is irrelevant. The fuse, no matter where it is placed on the briquette, will perform its attendant function. The placement of the fuse is merely an aesthetic design choice.

Applicant argues that GB fails to teach the proportions that are recited in the claims. It would have been obvious to one of ordinary skill in the art to have prepared the briquettes comprising the claimed components in their respective percentages because as seen in the Examples of GB the amount of the components may vary from one briquette to the next.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

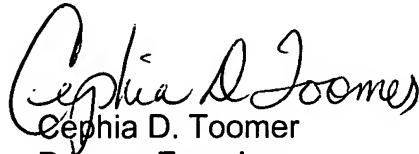
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 703-308-2509. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Cephia D. Toomer
Primary Examiner
Art Unit 1714

10061773\12

STN Columbus

RL: MOA (Modifier or additive use); USES (Uses)
(purifying agent, coal briquette synergists contg)

L4 ANSWER 42 OF 51 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1988:440522 CAPLUS

DN 109:40522

TI Characteristics of the combustion and degradation of heterogeneous lignite mixtures with **nitrate**s

AU Glazkova, A. P.; Terebilin, A. V.; Kazarova, Yu. A.

CS Moscow, USSR

SO Fizika Goreniya i Vzryva (1988), 24(2), 44-50
CODEN: FGVZA7; ISSN: 0430-6228

DT Journal

LA Russian

CC 51-18 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 67

AB The catalytic activity of a series of **nitrate**s in lignite combustion was in the order $\text{NaNO}_3 > \text{KNO}_3 > \text{Ba}(\text{NO}_3)_2 > \text{NH}_4\text{NO}_3 > \text{Ca}(\text{NO}_3)_2$. NaNO_3 , KNO_3 , and NH_4NO_3 are also active in charcoal and sawdust combustion, but the corresponding combustion rates are different than those for lignite. These **nitrate**s also catalyze the thermal decompn. of the lignite, charcoal, and sawdust.

ST lignite combustion metal **nitrate** catalyst; charcoal combustion metal **nitrate** catalyst; sawdust combustion metal **nitrate** catalyst; thermal decompn charcoal sawdust

IT Combustion catalysts
Thermal decomposition catalysts
(metal and ammonium **nitrate**s, for lignite and charcoal and sawdust)

IT Sawdust
Charcoal
RL: USES (Uses)
(thermal decompn. and combustion of, catalysts for, **nitrate** salts as)

IT 6484-52-2, Ammonium **nitrate**, uses and miscellaneous 7631-99-4, Sodium **nitrate**, uses and miscellaneous 7697-37-2D, alkali and alk. earth metal salts 7757-79-1, Potassium **nitrate**, uses and miscellaneous 10022-31-8, Barium **nitrate** 10124-37-5, Calcium **nitrate**
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for combustion and thermal decompn., of lignite and charcoal and sawdust)

~~L4 ANSWER 44 OF 51 CAPLUS COPYRIGHT 2003 ACS on STN~~

~~AN 1987:159454 CAPLUS~~

~~DN 106:159454~~

~~TI Inorganic clay-containing coal **briquettes** and methods for production thereof~~

~~IN Osuwan, Somchai; Bunyakiat, Kunchana~~

~~PA Alternative Fossil Fuels, Inc., USA~~

~~SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2~~

~~DT Patent~~

~~LA English~~

~~IC ICM C10L005-12
ICS C10L009-02~~

~~CC 51-24 (Fossil Fuels, Derivatives, and Related Products)~~

~~PAN.CNT 1~~

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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